

ABSTRACT

Include Figure 2

5 Consider a path between two nodes in a communications network. This path (which may be physical or logical) has a finite bandwidth or size. For particular types of communications network, such paths are manufactured and provided with standard bandwidths or sizes. When the amount of traffic between the two nodes along a single path exceeds the standard bandwidth, it is necessary to provide one or more additional paths between the two nodes. It is then necessary to distribute or allocate incoming traffic between the multiple possible paths and to do this in a manner which preserves the order of packets within particular flows of traffic. This is achieved by using flow labels of packets and inputting those flow labels into a hash function. The flow labels are preferably chosen pseudo randomly, or randomly, as well as uniformly from a specified range of values. The hash function results are bucketed and one bucket associated with each possible path. Any packet whose hash value falls into the hash bucket for a path is dispatched along that path. All the packets within a particular flow are given the same flow label and in this way, the order of packets within a particular flow is preserved.

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